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REEL #431

FROM

PODOR, MIHALY

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PODOR, Mihaly, okleveles kozgazdasz

Cost analysis of coal production by underground mining. Bany lap 98 no.4:256-266 Ap '65.

1. Tatabanya Coal Mining Trust, Tatabanya.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

MAZURENKO, Grigoriy Iovich; PODOROZHNYY, P.G., dotsent, otv.red.; KOTLYAROV, Yu.L., red.; MALYAVKO, A.V., tekhred.

[Diseases of the liver and the biliary tracts and their treatment at the Truskavets Health Resort] Zabolevaniia pecheni i zhelchnykh putei i ikh lechenie na kurorte Truskavets. L'vov, Izd-vo L'vovskogo univ., 1960. 92 p. (MIRA 13:7)
(LIVER--DISEASES) (BILIARY TRACT--DISEASES)
(TRUSKAVETS--MINERAL WATERS)

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PODMOGIL'NAYA, A. P., TOCHENYY, T. M., CHUDNOVSKAYA, L. I., MAL'KOV, A. A.

"Hygienic Study of Residential Construction in the Cities of Stalinskaya Oblast."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

28(5) SOV/32-25-8-40/44

AUTHORS: Lobachev, M. V., Podmoshenskaya, S. V., Trilesnik, I. I., Shadrina, A. B.

TITLE: Multi-channel Photoelectric Devices DFS-10 for Emission Spectrum Analysis

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 1013-1014 (USSR)

ABSTRACT: The instrument mentioned in the title has a photoelectric recorder of the individual spectrum lines (SL) and is intended to be used for rapid- and marking quantitative spectrum analyses of metals and alloys. The instrument has 36 outlet slits separating 36 (SL). A special programming device makes possible the simultaneous application of any desired combination of 12 (SL), using one (SL) as comparison line/ thus 11 elements can be simultaneously determined in a sample. The instrument has a polychromator (vertical scheme), a recording receiver and a GEU-1 generator for electron regulation. The monochromatic radiation is focussed by special mirrors on 36 photoelements (with Sb/Cs-photo cathodes type STsV). The operation interval of the instrument with the photoelements STsV is 2200-5500 Å.

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SOV/32-25-8-40/44

Multi-channel Photoelectric Devices DFS-10 for Emission Spectrum Analysis

The operations of the instrument are described by a schematic diagram (Fig). The recorder is a potentiometer type EPP-09. The reproducibility of the photometric recording during 8 hours of continuous operation at a constant radiation is ± 0.6%. There is 1 figure.

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9,6150 (also 4702)

40703

S/169/62/000/008/072/090
E032/E114

AUTHORS: Yefremov, A.I., Podmoshenskiy, A.L., Ivanov, M.A., Nikiforov, V.N., Yefimov, O.N.

TITLE: Filtering apparatus for the study of short-wave solar radiation

PERIODICAL: Referativnyy zhurnal, Geofizika, no.8, 1962, 17, abstract 8 G 128. (In the Symposium: 'Iskusstv. sputniki Zemli' ('Artificial Earth Satellites') no.10, M., AN SSSR, 1961, 48-54)

TEXT: A brief description is given of the method and apparatus used on a satellite to study the intensity of short-wave solar radiation by isolating different spectral regions with the aid of filters. The spectral sensitivity of the pulse counting radiation detectors, the secondary electron multipliers of the open type with BeO and SrF_2 photocathodes, and also the spectral sensitivity of the apparatus with the various filters [(Cu, Be, Al, $(CH)_n$, LiF] are described. The advantages of this method as compared with the counter method are emphasised; it is possible to use an extensive

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

S/169/62/000/008/072/090
E032/E114

Filtering apparatus for the study...

selection of filters with a single sensitive element capable of covering a wide spectral region (from X-rays to the ultraviolet), the lower sensitivity to the cosmic ray background, and the very wide range of the counting rates which can be recorded. Provision was made for regular zero checks and also checks of the overall sensitivity. A photograph and a block diagram of the apparatus are given, the electronic circuits (partly transistorised) are described, and the operation of a two-lens optical probe of the automatic switch, which operates when solar radiation enters the device, are described. The instrument is capable of recording the short-wave emission of solar flares from a satellite.
8 references.

[Abstractor's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

33309
S/560/61/000/010/007/016
D299/D302

9.6150 (also 1482)

AUTHORS: Yefremov, A. I., Podmoshenskiy, A. L., Ivanov, M. A., Nikiforov, V. N., and Yefimov, O. N.

TITLE: Filtering equipment for study of the short-wave radiation of the sun

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 10. Moscow, 1961, 48-54

TEXT: The method of investigation involves separation of the various spectral components of the short-wave radiation of the sun by a set of filters which successively pass in front of a detector. The most suitable detector for such purposes is a secondary-electron multiplier which operates under the conditions of cosmic-space vacuum. The main requirement towards the photocathode of the detector is a sharp decline in its photo-emission in the near ultraviolet and visible regions of the spectrum. The most suitable material for such photocathodes is

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Filtering equipment for...

BeO and SrF_2. The spectral sensitivity of secondary-electron multipliers with such cathodes is shown in a figure. The filters are mounted on a disk which rotates in front of the detector. Each second, the disk makes 1/12 of a full turn, placing a different filter in front of the detector. Six positions of the disk are occupied by filters for soft X-rays and far-ultraviolet radiation; three have filters of crystalline quartz for the ultraviolet region with wavelength longer than 1500 Å, where the sun's radiation does not undergo fluctuations; the quartz filters can be used for correcting the readings of the apparatus related to the other filters; thereby, a β-source (radioactive C^{14}) is placed in front of the apparatus for calibrating its sensitivity. Two other positions serve for checking the zero of the apparatus. The above method of investigation has the following advantages over the Geiger-Müller counter method: (1) The filters can be chosen from a wide

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Filtering equipment for...

range of materials, as they are not part of the detector itself (as in the case of Geiger counters). (2) The radiation in the various spectral regions is measured by a single detector, and not by different ones (as with Geiger counters), which excludes errors due to variations in the sensitivity of the various detectors. (3) A wide spectral range (from X-ray to ultraviolet) can be covered (unlike Geiger counters). (4) The sensitivity to cosmic-ray and hard X-ray background is smaller. (5) The range of recorded counting-rates is at least a hundredfold that of Geiger counters. (6) Regular checking of the zero and of the sensitivity of the apparatus is possible. The apparatus consists of 2 main parts: the three optical units СФ-1, СФ-2, СФ-3, (SF-1, SF-2, SF-3), and the recording unit РТ (RT). Each of the SF-units incorporates 2 detectors and disks with filters, a relay mechanism for turning the disks, a preamplifier, and optical sensors for switching off the apparatus when it is on the dark side of the orbit. The SF-units are placed on the outside of the space-ship at various points. The presence of

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S/560/61/000/010/007/016
D299/D302

Filtering equipment for...

3 autonomously operating units, each having 2 detectors, permits increasing the total angle of vision of the apparatus. The RT-unit, placed inside the space-ship, incorporates 3 autonomous counting-rate meters (CRM) with a common output connected to the telemetering system; each CRM is linked to its SF-unit. The radiation is recorded by means of pulse counting. The pulses pass through the secondary-electron multiplier, the preamplifier, and the integrating circuit. For greater accuracy, the integrating circuit of each counting-rate meter operates over 3 ranges, corresponding to 0 - 500 counts per sec., 0 - 5000 counts per sec., and 0 - 50000 counts per sec. Each SF-unit is switched on autonomously by means of a special sensor. Particular care is taken to prevent switching-on by light reflected from the earth's surface. The overall power requirement of the apparatus is 12 watt. To ensure a normal heat balance, the SF-units on the outside of the space-ship have aluminum polish and colorless-oxidized casings. The equipment was tested and calibrated in the laboratory prior to being installed in

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S/560/61/000/010/007/016
D299/D302

Filtering equipment for...

the Sputnik. There are 10 figures and 8 references: 9 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: H. Friedman, Trans. Intern. Astr. Un., 10, 706, 1960, Cambridge Univ. Press.

SUBMITTED: April 10, 1961

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

YEFREMOV, A.I.; PODMOSHENSKIY, A.L.; IVANOV, M.A.; NIKIFOROV, V.N.; YEFIMOV, O.N.

Radio filters used in investigating the short-wave radiation from the sun. Isk.sput.Zem. no.10:48-54 '61. (MIRA 14:11)
(Radio filters) (Solar radiation) (Artificial satellites)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

40250
S/169/62/000/007/130/149
D228/D307

3,2430

AUTHORS: Yefremov, A. I., Podmoshenskiy, A. L., Yefimov, O. N. and Lebedev, A. A.

TITLE: Investigating short-wave solar radiation

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 8, abstract 7G53 (V sb. Iskusstv. sputniki Zemli, no. 10, M., AN SSSR, 1961, 4-11)

TEXT: The authors state the results of measuring the intensity of short-wave solar radiation through different filters by means of secondary-electron multipliers, working under pulse-counting conditions on the 2nd space satellite of 19 August 1960. Specimen records of readings are given. These were made on equipment with a BeO photocathode when the sun was quiet (14.15 hrs - 14.21 hrs; 17.18 hrs - 17.23 hrs; and 20.17 hrs - 20.25 hrs) and at the time of solar flares (15.45 hrs - 15.54 hrs) and also on equipment with a SrF_2 photocathode when the sun was quiet (17.18 hrs - 17.23 hrs). Signal variations are connected with the change in the orientation of in-

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Investigating short-wave ...

struments relative to the sun. Zero instrumental readings, even in polar regions, corresponded to the normal working background during laboratory tests; the effect from charged particle flows constituted a negligible portion of the effect from short-wave solar radiation. There were, however, occasional splashes of radiation when the equipment was not aimed at the sun. It is supposed that roentgen radiation, induced by particles of an atmospheric radiation belt in the polar region, may be a possible cause of this phenomenon. Comparison of the recordings for SiO_2, LiF and CaF_2 filters with those for Al, $(CH)_n$, Be and Cu filters showed that roentgen radiation is registered through Al and $(CH)_n$ filters but not through a Cu filter (1.4 - 3 Å). The Be filter recording level increased distinctly at the time of solar flares, but it was negligible in quiet periods. The following conclusions are drawn on the basis of the processing of the measurement results. The radiation flow in the region 44 - 110 Å ($(CH)_n$-filter) was constant with a precision of ± 8% and corresponded to 1.5×10^7 pulses·cm^{-2}·sec^{-1}.

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Investigating short-wave ...

This radiation did not change at the time of a flare. In the region 8 - 21 Å (Al-Filter) the flow was constant (6.2×10^4 pulses. $cm^{-2}.sec^{-1}$), apart from the interval 15.45 - 15.54 hrs (the period of heightened activity), when it increased by 3.2 times, and also the period 14.24 - 14.28 hrs, when it grew by 63%. Fluctuations in this radiation were noticed, too, in other time periods. In the region shorter than 8 Å (Be-filter) radiation from the quiet sun was very low and was often indistinguishable above the background of radiation with a non-solar origin. At the time of heightened solar activity the flow in the region 5 - 10 Å (Be-filter) increased by 11-fold as compared with that recorded up to this background. In the chromospheric hydrogen line Ly-α the radiation flow comprised 2 - 6 ergs/cm^2.sec and did not appear to increase at the time of an active solar phase. These data were interpreted on the assumption that the X-ray emission of the sun and its flare is the radiation of an absolutely black body. The temperature of the sun's corona was found to equal 9 x 105 °K, its emission capacity

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Investigating short-wave ...

being 5 x 10^{-16} of that of a black body. A chromospheric flare's temperature amounts to 6.5 x 10^{6} °K, its relative area on the sun's disc being 10^{-4}. [Abstracter's note: Complete translation.]

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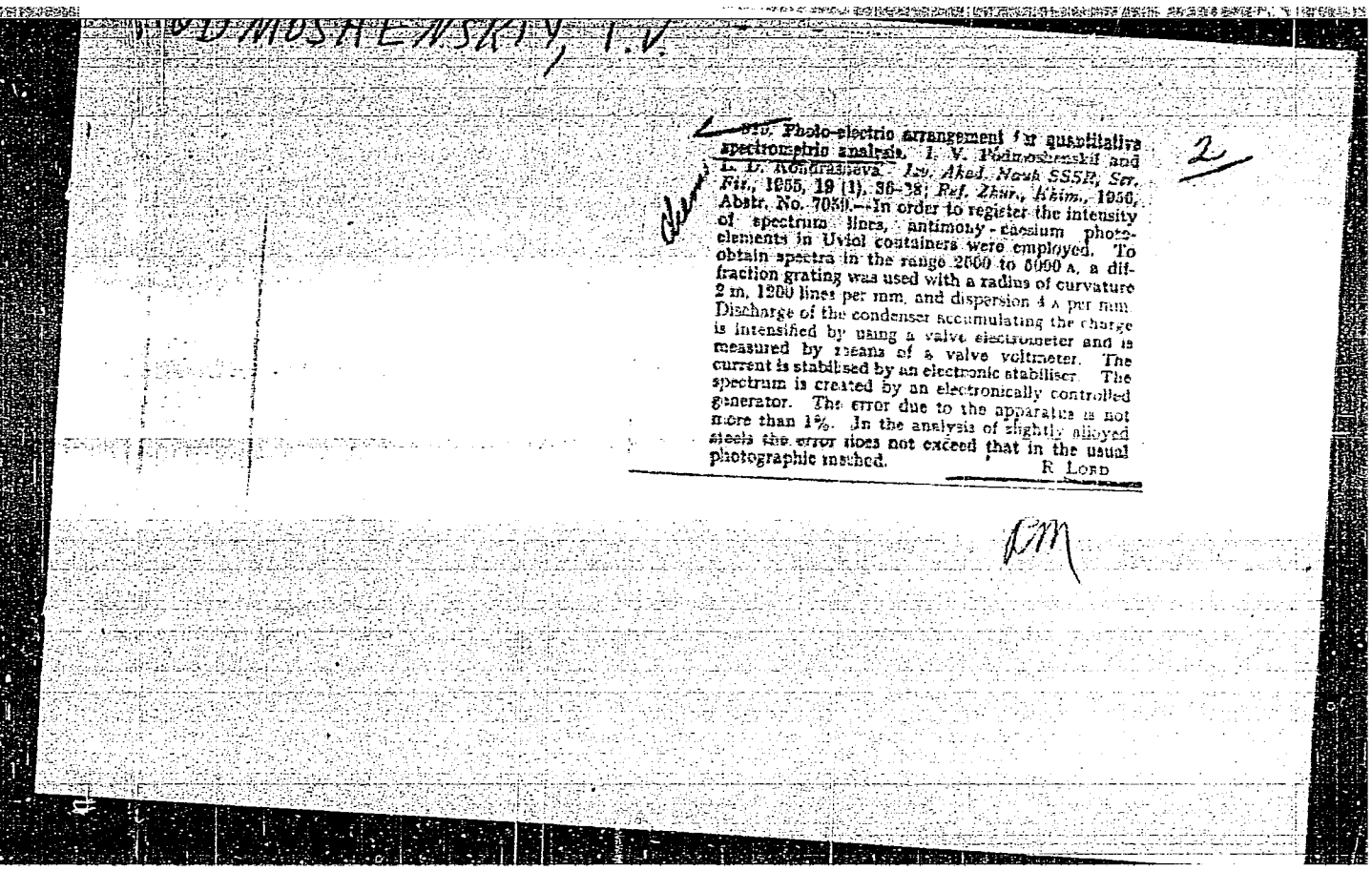

PODMOSHENSKII, I. V.

810. Photo-electric arrangement for quantitative spectrometric analysis. I. V. Podmoshenskii and L. L. Kondrashova. *Izv. Akad. Nauk SSSR, Ser. Fiz.*, 1955, 19 (1), 36-38; *Ref. Zhur., Khim.*, 1956, Abstr. No. 70810.—In order to register the intensity of spectrum lines, antimony-caesium photo-elements in Uviol containers were employed. To obtain spectra in the range 2600 to 6000 A, a diffraction grating was used with a radius of curvature 2 m, 1200 lines per mm, and dispersion 4 A per mm. Discharge of the condenser accumulating the charge is intensified by using a valve electrometer and is measured by means of a valve voltmeter. The current is stabilised by an electronic stabiliser. The spectrum is created by an electronically controlled generator. The error due to the apparatus is not more than 1%. In the analysis of slightly alloyed steels the error does not exceed that in the usual photographic method.

R. Lord

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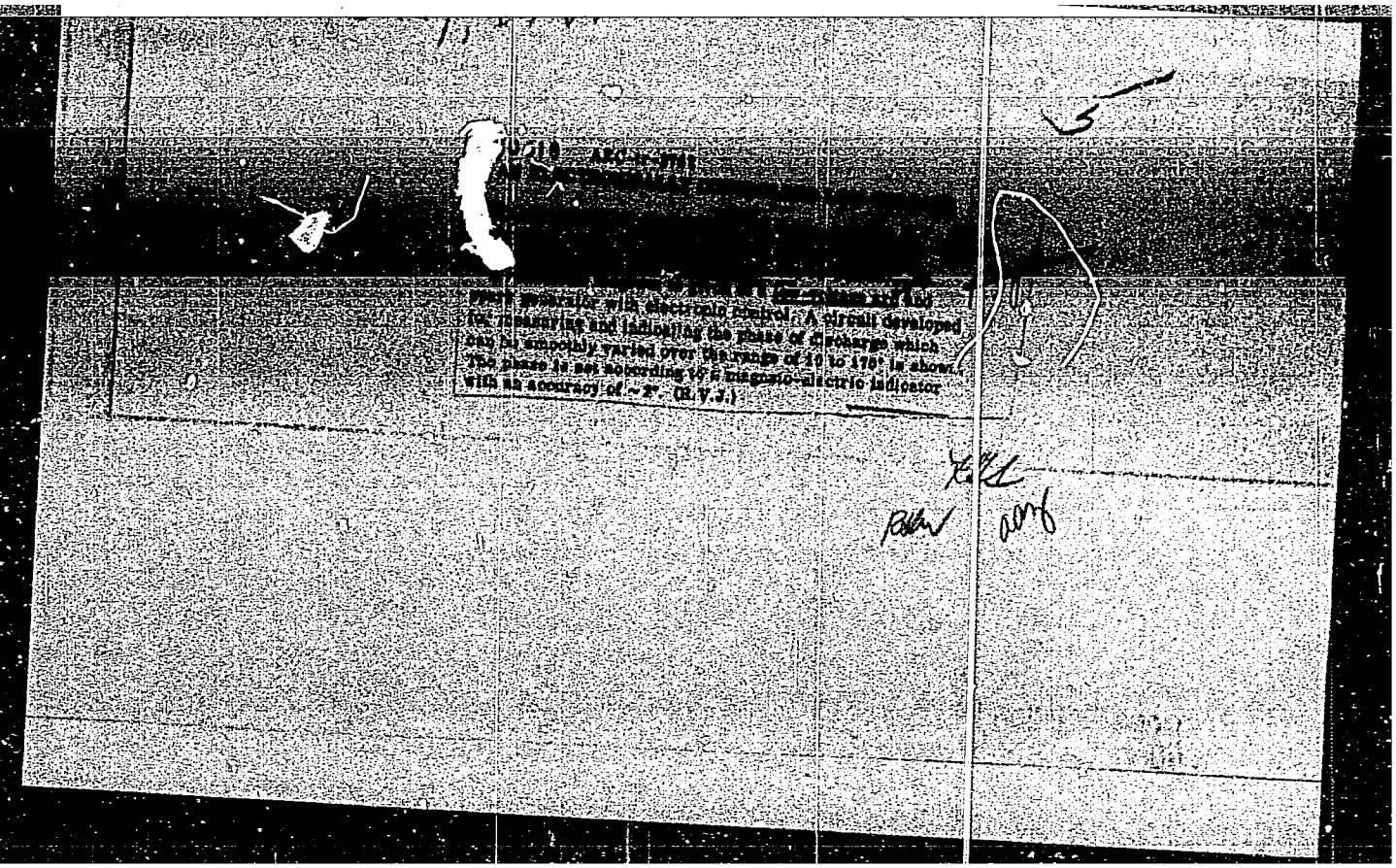

[redacted] generator with electronic control. A circuit developed for measuring and indicating the phase of discharge which can be smoothly varied over the range of 10° to 170° is shown. The phase is set according to a magneto-electric indicator with an accuracy of ~ 2°. (R.V.J.)

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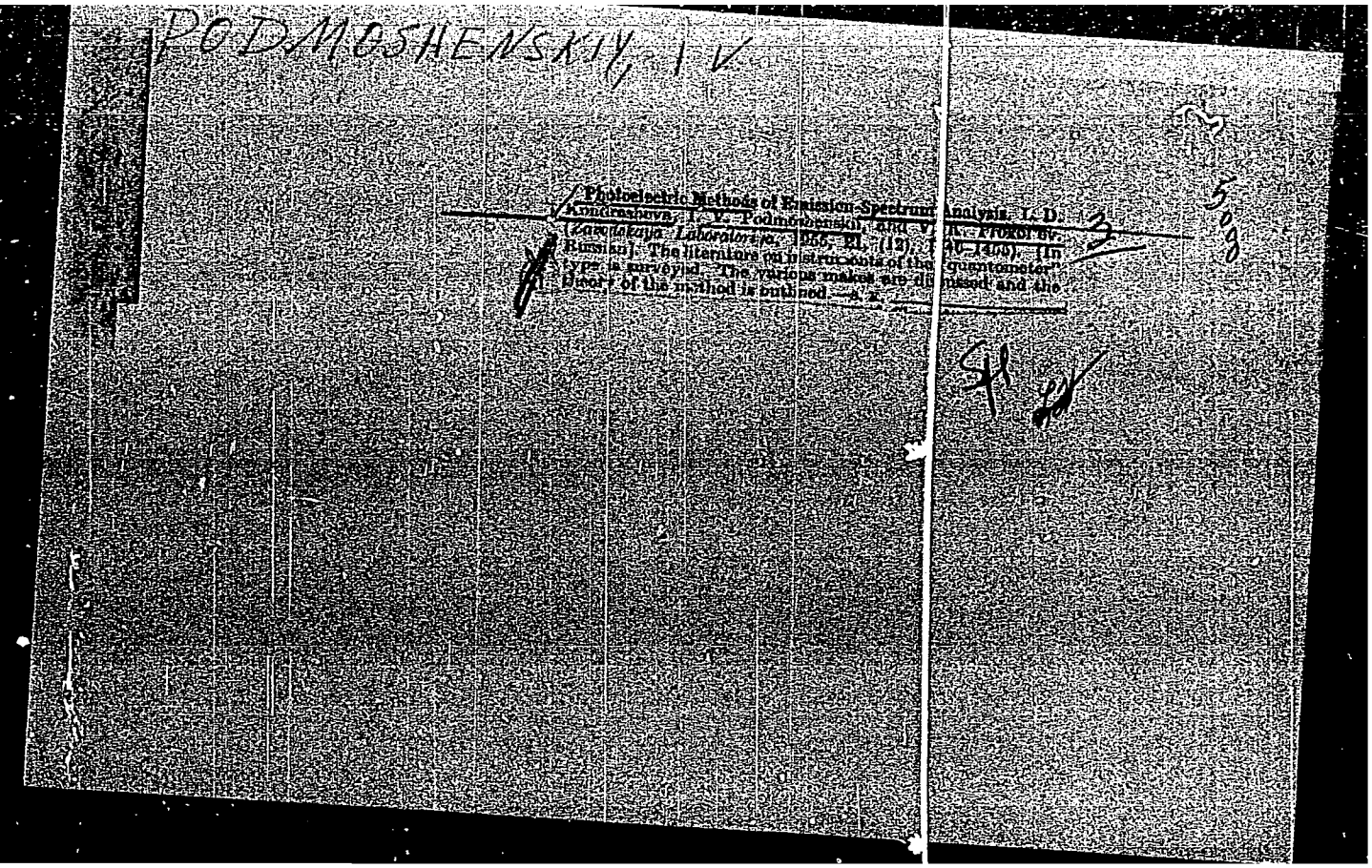

PODMOSHENSKIY, I. V.

Photoelectric Methods of Emission Spectrum Analysis. I. D. Kuznetsova, I. V. Podmoshenskii, and V. [illegible]. (Zavodskaya Laboratoriya, 1955, 21, (12), [illegible] Russian). The literature on instruments of the [illegible] type is surveyed. The various makes are discussed and the [illegible] theory of the method is outlined. — A. Z.

[illegible] analysis. I. D. [illegible] Morozova. [illegible] 40–(1049). (In [illegible] quantometer.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

Podmoshenskiy, I. V.

24(7) PHASE I BOOK EXPLOITATION SOV/1700

L'vov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) [L'vov] Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp. 4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

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Materials of the 10th All-Union Conference (Cont.) SOV/1700

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

SOV/51-4-4-22/24

AUTHORS: Ogurtsova, N.N. and Podmoshenskiy, I.V.

TITLE: Investigation of a Powerful Pulse Discharge in a Channel with a Restricted Diameter (Issledovaniye moshchnogo impul'snogo razryada s ogranichennym diametrom kanala)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 4, pp 539-541 (USSR).

ABSTRACT: A high-temperature pulse discharge producing continuous spectrum, with a constant brightness during the pulse, is necessary for high-speed photography, high-temperature pyrometry and for other purposes. The present note describes such a pulse source. The discharge was produced by a special circuit consisting of four units each with 100 μF capacitance and 1.5 μH inductance (Figure 1). The capacitors were charged to 3 000 V and the wave impedance of the supply line was 0.12Ω. The discharge was produced in an aperture in a textolite plate 10 mm thick. The aperture diameter was 2 mm. The pulse duration was 10^{-4} sec, the peak discharge current was 13 000 A and the peak voltage across the discharge gap was 1 000 V. The current density in the discharge was 4×10^5 A/cm^2. Oscillograms of current (Curve a), voltage (Curve b) and emission intensity (Curve v) are shown in Figure 2. It was found that

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Investigation of a Powerful Pulse Discharge in a Channel with a Restricted Diameter

very high pressures (of the order of 500 atm) were produced in the discharge channel. Figure 3 shows photographs of the discharge spectrum. In the axial direction, the discharge channel emits continuous spectrum intersected by absorption and emission lines. The emission lines belong to ions and the absorption lines to atoms of elements present in the electrodes and the textolite plate. The line spectrum on both sides of the continuous spectrum is due to emission by the parts of the discharge (jets) outside the channel in textolite. On lowering of external pressure to 1 mmHg, the spectrum is not affected. This confirms a hypothesis that the high pressure in the discharge channel is due to gases evolved by the textolite plate on heating by the discharge. Decrease of the discharge-channel length from 10 to 5 mm does not affect the nature of the spectrum. On further decrease of the discharge-channel length, the intensity of the continuous spectrum decreases and that of the line spectrum increases. Similar behaviour is observed on increase of the discharge-channel diameter to values greater than 3 mm. Discharges in a channel 10 mm long and 2 mm in diameter absorb completely light falling on them. Saturation

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of radition occurs in the discharge channel which then behaves like a black body. Dependence of the brightness temperature on wavelength in the region 4 100 - 5 700 Å is given in Figure 4. Within the limits of experimental error, the measured brightness temperature does not change with wavelength and is equal to 32 000 K. Using spectrally-pure carbon as the electrode material, a continuous spectrum which is almost free from absorption lines can be obtained (Figure 5). The source described in this note is suitable for study of absorption spectra, anomalous dispersion and high-speed photography. The same discharge may be also employed as a calibrated source of continuous spectrum in studies of plasma at high temperatures and pressures. There are 5 figures and 2 Soviet references.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im.S.I.Vavilova (State Optical Institute im. S.I. Vavilov)

SUBMITTED: September 14, 1957

Card 3/3 1. Pulse generators--Circuits

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

SOV/81-59-19-67759

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 19, p 131 (USSR)

AUTHORS: Podmoshenskiy, I.V., Kondrasheva, L.D.

TITLE: The Installation of Concave Mirrors for Studying Absorption in Sources of Light

PERIODICAL: Fiz. sb. L'vovsk. un-t, 1958, Nr 4(9), pp 204 - 205

ABSTRACT: For measuring the absorption in open flames and electrical discharges it is proposed to use an optical system based on two concave spherical mirrors with a small passage, placed symmetrically relative to the light source which is located between them. As a result of the manifold reflection from the mirrors the total brightness of the center of the source becomes equal to the brightness of a black body at the temperature of the source. The reabsorption of radiation has been detected; the self-conversion and the width of spectral lines increase considerably.

L. Gribov

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

GOLUBTSOVA, N.N.; PODMOSHENSKIY, I.V.

Light sources for high speed motion-picture cameras. Usp.nauch.fot. 6:58-61 '59. (MIRA 13:6)
(Motion-picture cameras)
(Photography--Lighting)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

24(7) SOV/51-6-6-22/34

AUTHORS: Podmoshenskiy, I.V. and Shelamina, V.M.

TITLE: Determination of Absorption of Analytic Spectral Lines in an Arc and a Spark (Opredeleniye pogloshcheniya analiticheskikh spektral'nykh liniy dugi i iskry)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 6, Nr 6, pp 813-815 (USSR)

ABSTRACT: The authors describe a method of measuring absorption using two identical sources. One source is an arc or a spark (5 in Fig 1) in which the substance studied is placed and the other is a virtual source formed by focusing the light from the arc or the spark onto a concave mirror 7 by means of a lens 6 (Fig 1). Some of the light from 7 is absorbed at 5 and some of it passes on to a spectrometer slit 1 (via lens 2 and a diaphragm 3). This method ensures that these two sources are exactly identical. To allow for the lenses at the mirror 7 and the objective 6 and for the diaphragm action of the arc electrodes 4, the following procedure is used. A wire is placed across a light beam at the objective 6. Then a stigmatic spectrograph will record two spectra: (1) the emission spectrum of the arc 5 at the points shielded by the wire and (2) the emission spectrum of 5 with the addition of light from 7 transmitted by 5. The method was applied to lines of Ni, Cr, Si and Mn

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Determination of Absorption of Analytic Spectral Lines in an Arc and a Spark

excited in an alternating-current arc. At low concentrations of these metals in the arc their self-absorption is small, but it rises with concentration. Self-absorption was also noticed in lines of Ni and Cr excited in a high-voltage spark. There are 2 figures and 2 Soviet references.

Card 2/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODMOSHENSKIY, I. V. OGURTSOVA, N. N.

A Capillary 40 000 K Black Body Pulse Light Source.

report submitted for: The 5th International High Speed Photography Congress, Washington, D.C. 16-22 Oct., 1960.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

84936

S/051/60/009/003/012/019/XX
E201/E191

26.2311

AUTHORS: Kondrasheva, L.D., and Podmoshenskiy, I.V.

TITLE: Determination of Atomic Concentrations in Arc Plasmas by a Pulse Absorption Method

PERIODICAL: Optika i spektroskopiya, 1960, Vol 9, No 3, pp 281-287

TEXT: The authors studied plasmas in d.c. arcs burning in air between vertically positioned steel and copper electrodes. A pulse source of light ЭВ-39 (EV-39) was used; its emission spectrum was close to that of an absolute black body at a temperature of 40 000 °K. With this source is was possible to record absorption spectra of arc plasmas with temperatures up to 6000 °K without the necessity of correcting for plasma emission. The apparatus is shown schematically in Fig 1. The discharge aperture of the pulse source (1 in Fig 1) was projected onto a d.c. arc plasma (2). The light transmitted by the plasma reached an entry slit (3) of an ИСП-51 (ISP-51) spectrograph with a camera УФ-85 (UF-85). To obtain an absorption spectrum of a transverse cross-section of the arc, the arc image was rotated by 90° about the optical axis using a Dove prism (4). A shutter (5) in front of the spectrograph slit was opened simultaneously with

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E201/E191

Determination of Atomic Concentrations in Arc Plasmas by a Pulse Absorption Method

triggering of the pulse-source circuit by a signal from a photocell (6); the photocell was excited with a point incandescent lamp (8). Table 1 lists several wavelengths of arc-excited Fe and Cr lines; their lower-level potentials and arc diameters are deduced from the wavelengths of these lines. Table 1 shows that the plasma volume occupied by atoms at levels of about 3 eV amounts to 30% of the volume occupied by atoms in the ground state. To resolve the absorption line profiles, the authors replaced the ISP-51 spectrograph by a system (Fig 2) consisting of an echelle grating (4 in Fig 2) crossed with a prism (3); its resolving power was 1.8×10^5. Spectrograms obtained in this way showed that the pulse source has a uniformly continuous spectrum (Fig 3), crossed by a few absorption lines; an absorption spectrum of an arc plasma is shown in Fig 4. Direct determinations of Cr, Mn and Fe atomic concentrations were carried out in 2 A arcs with 2 mm electrode separation. The absorption line profiles obtained in these determinations are shown in Figs 5 (Cr triplet),

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E201/E191

Determination of Atomic Concentrations in Arc Plasmas by a Pulse Absorption Method

6 (Mn triplet) and 7 (Fe line). Characteristics of the lines used are listed in Table 2. The concentrations of Cr and Mn atoms were of the order of 10^{13} cm^{-3}; for Fe atoms 10^{15} cm^{-3} was obtained (Table 3).

Acknowledgements are made to F.M. Gerasimov and G.P. Startsev for supply of apparatus used in measurements with the echelle grating.

There are 7 figures, 3 tables and 5 references: 3 Soviet, and 2 English.

SUBMITTED: October 17, 1959

Card 3/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

GUREVICH, D.B.; PODMOSHENSKIY, I.V.

Relation between the electron and gas temperatures in a positive gas discharge column. Opt. i spektr. 15 no.5:587-594 N '63.
(MIRA 16:12)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

ACCESSION NR: AP4009456

S/0051/63/015/006/0743/0746

AUTHOR: Ogurtsova, N. N.; Podmoshenskiy, I. V.; Shelemina, V. M.

TITLE: Characteristics of plasma jets from a high-power capillary discharge

SOURCE: Optika i spektroskopiya, v.15, no.6, 1963, 743-746

TOPIC TAGS: capillary discharge, plasma, plasma jet, EV 39 source, plasma jet structure

ABSTRACT: The paper describes and discusses the results of spectroscopic investigation of the plasma jets escaping from the open ends of a pulse textolite (laminated resin) capillary EV-39 light source. The current density in the capillary was about 3×10^7 A/cm^2, the thermal dissipation to the walls about 10^7 watts/cm^2, and wall erosion rate about 30 cm/sec. The temperature was about 40 000°K; the channel pressure 400 to 500 atm. Under these conditions the chemical composition of the plasma channel and jet was largely determined by the composition of the capillary walls (the atomic composition of textolite is 46.4% H, 37.1% C and 15.5% O and ash content is about 1% by weight). The purposes of the study were to clarify the possible influence of the quasistationary plasma discharge on the radiation of the

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ACC. NR: AP4009456

capillary source and to determine the approximate structure and characteristics of the jets. Time-resolved studies showed that despite the brevity of the period (100 to 400 microsec) during which the temperature and pressure in the EV-39 tube remain constant, stationary or quasistationary gas outflow conditions have enough time in which to be established. Shock waves are evident in the time-resolution spectrograms; the wave propagation velocity is about 1 km/sec. A method proposed for measuring the gas velocity in the jet was used to evaluate the velocity at the jet axis as about 13 km/sec behind the shock front. Temperature evaluations with reference to selected C II and C III lines indicate that the rate of cooling in the heart of the jet is relatively slow ($T = 30\,000^{\circ}K \pm 20\%$, that is, not much lower than in the channel). Thus, the heavy-current capillary discharge tube EV-39 (modified EV-45) can be regarded as a pulse plasmotron, capable of providing a high-velocity, high-temperature plasma jet. Unlike conventional gas-blast plasmotrons, with the present tube one can vary the composition of the plasma jet at will by appropriate choice of the material lining the inner wall of the capillary, which makes it feasible to investigate plasmas of different composition. "The authors are grateful to V. I. Bayunov and M. I. Demidov for assistance in photographing the jets." Orig.art.has: 4 figures.

Card 2/2 Sub: 4 Mar 63

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODMOSHENSKIY, I.V.; SHELEMINA, V.M.

Effect of the coating of samples with a thin layer of water on the analytical properties of high voltage spark. Zav.lab. 29 no.5:562-563 '63. (MIRA 16:5)
(Spectrum analysis) (Electric spark) (Sampling)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

ACCESSION NR: AP4039702 S/0051/64/016/006/0949/0957

AUTHOR: Ogurtsova, N.N.; Podmoshenskiy, I.V.; Shelemina, V.M.

TITLE: Coefficient of continuous absorption of hydrogen-carbon plasma at 40,000K and pressures of hundreds of atmospheres

SOURCE: Optika i spektroskopiya, v.16, no.6, 1964, 949-957

TOPIC TAGS: plasma, plasma temperature, high temperature plasma, light source, absorption coefficient, gas discharge, multicomponent plasma, plasma absorption, ruby laser

ABSTRACT: The present determination of the coefficient of continuous absorption of plasma at high temperature was undertaken for the purpose of finding the degree of deviation of the radiation from an EV-39 capillary discharge source (N.N.Ogurtsova, I.V.Podmoshenskiy, and M.I.Demidov, Opt.mekh.prom.No.1,1,1960) from the emission of an absolutely black body. In view of the fact that the temperature, pressure, and chemical composition of the plasma in a high-power pulse discharge in the EV-39 had been measured with good accuracy, it was feasible to calculate the continuous absorption associated with free-free and free-bound electron transitions for purposes of comparison with experimental data. In the present work, 10,000-ampere discharges

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ACCESSION NR: AP4039702

were studied in textolite capillary tubes 10 mm long and 2 and 3 mm in diameter, i.e., conditions approximating the operating conditions of the EV-39 source. It was established experimentally that the atomic composition of the plasma was 47% H, 37% C, 16% O, and under 1% inorganic contaminants, and that the plasma was in thermodynamic equilibrium at 39,000K and pressures in the range from 120 to 500 atm. The values of the coefficient of continuous absorption were measured by two independent procedures: transillumination of the plasma by the radiation from a more intense source, and measurement of the absolute intensity of emission of a plasma layer of known thickness. An oscillographic recording technique was employed. The long-wave source for transillumination was a ruby laser; in the short-wavelength region, the source was a flash tube similar to the EV-39. The results for 500 atm (coefficient versus wavelength) are given in a figure. The coefficient at 39,000K and at 120 atm equals 1.2 cm^{-1} for λ = 2600 Å and about 6.0 at 500 atm; for λ = 6942 Å the values are about 10 and >11 cm^{-1}. Comparison with theory shows that at 120 atm, the experimental coefficient is 2 to 3 times higher than predicted by theory; at 500 atm the agreement is closer. The reasons for the discrepancy are discussed, and means for reducing it are indicated. Orig.art.has: 1 formula, 4 figures, and 1 table.

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ACCESSION NR: AP4039702

ASSOCIATION: none

SUBMITTED: 26Jul63 ATD PRESS: 3084 ENCL: 00

SUB CODE: ME, OP NR REF SOV: 008 OTHER: 007

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

L 34881-65 EWT(l)/EPA(s)-2/EWT(m)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWP(t)/EWP(b)/
EWA(m)-2 Pz-6/Po-4/Pab-10/Pt-10/Pi-4 IJP(c) JD/JG/AT S/0051/65/018/002/0190/0197
ACCESSION NR: AP5005032

66
67
B

AUTHOR: Aleksandrov, V. Ya.; Gurevich, D. B.; Podmoshenskiy, I. V.

TITLE: Investigation of the mechanism of excitation and energy exchange from the spectra of nonequilibrium radiation, produced by a pulsed electric field in a thermal plasma. I. Mercury arc

SOURCE: Optika i spektroskopiya, v. 18, no. 2, 1965, 190-197

TOPIC TAGS: mercury arc, arc discharge plasma, plasma radiation, plasma excitation, plasma temperature

ABSTRACT: This is a continuation of earlier work by two of the authors (Gurevich and Podmoshenskiy, Opt. i spektr., v. 15, 587, 1963), in which a relaxation method was proposed for determining the difference between the excitation temperature and a gas temperature, based on comparison of the cooling time of electrons and heavy particles. It was found that in the positive column of a mercury arc it is impossible to observe the defference between the excitation temperature and the gas temperature at atmospheric pressure, but when an electric field many times stronger than the initial stationary field is produced in the positive column, the temper-

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ature difference becomes observable. The investigations were therefore made using 3--6 keV pulses of short duration (10^{-8} sec), using the set-up shown in Fig. 1 of the Enclosure. By taking oscillographs of the spectral lines it was found that the additional radiation due to the high-voltage pulse has two phases -- nonequilibrium, and equilibrium. The amplitude of the first phase decreases with increasing excitation potential and depends on the multiplicity of the level. A study of the nonequilibrium radiation has shown that in a mercury-arc lamp at atmospheric pressure the transfer of kinetic energy from the electrons to the atoms occurs in the case of inelastic collisions via electronic excitation and stepwise extinction by the atoms, at a low energy difference between levels. It was also found that in the nonequilibrium phase the excitation temperature of sufficiently isolated levels is close to the electron temperature, while that of the higher levels, which have a multiplet structure, is closer to the temperature of the atoms. The ionization temperature is also close to the atom temperature. The luminescence of 14 mercury lines and the radiation of the continuous spectrum was investigated in different wavelength regions. Several factors that influence the performance of the experiment are discussed, such as the occurrence of relaxation, magnetic compression, skin effect, and others. "The authors thank M. I. Demidov, for modifying the DESO-1 oscilloscope to make possible registration of single

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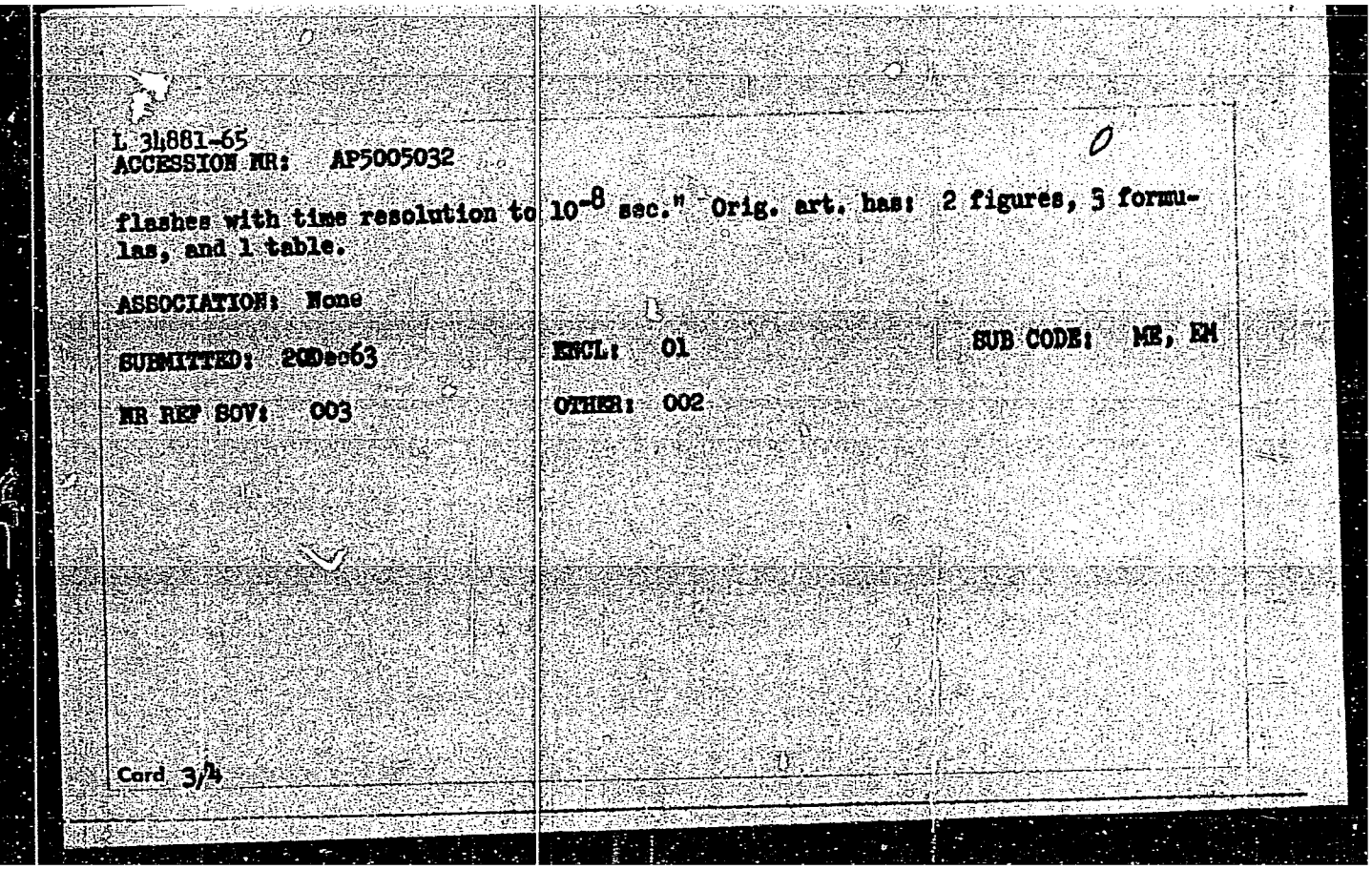

L 31881-65
ACCESSION NR: AP5005032

flashes with time resolution to 10^{-8} sec." Orig. art. has: 2 figures, 3 formulas, and 1 table.

ASSOCIATION: None

SUBMITTED: 20Dec63 ENCL: 01 SUB CODE: ME, EM

NR REF SOV: 003 OTHER: 002

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ACCESSION NR: AP5005032

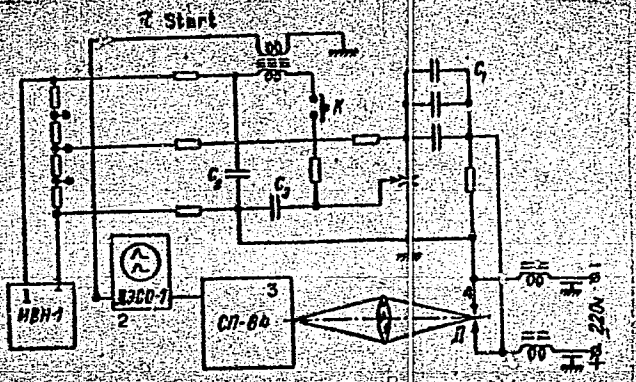

Fig. 1. Diagram of experimental set-up.

1 - Power supply
2 - oscilloscope
3 - multichannel spectrometer
4 - arc

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L 11061-66 EWT(1)/EWA(h) IJP(c)
ACC NR: AT6001388 SOURCE CODE: UR/3180/64/009/000/0076/0078

AUTHOR: Bayunov, V. I.; Demidov, M. I.; Podmoshenskiy, I. V.

61
B+1

ORG: none

TITLE: Spectrochronograph with an image converter 25

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinematografii. Uspekhi nauchnoy fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed photography and cinematography), 76-78 and insert facing page 81

TOPIC TAGS: image converter, plasma diagnostics, spectrographic camera

ABSTRACT: Using PIM-type converters with an amplifier, the authors constructed an attachment to mass produce spectrographs for the high speed recording of various portions of the spectrum, i. e., they developed an electron optical spectrochronograph. In order to make the instrument as versatile as possible, a high degree of variation was provided for in camera speed and scanning speed. The resulting complexity of the electronic control circuits required the use of 50 electron tubes, 9 semiconductor triodes, and 62 diodes. The instrument permits the photographing of portions of the spectrum up to 10 mm long at frequencies from 1 thousand to 10 million frames/sec for a total number of frames of 3 to 16 and linear scanning with a time resolution to up 10^{-9} sec. Other features and the operation of the apparatus are described. Experi-

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ACC NR: AT6001388

ence with the spectrochronograph shows that the high sensitivity of instruments with image converters and the reliable electrical synchronization with the phenomenon being photographed make them irreplaceable in optical studies of plasma. Orig. art. has: 4 figures.

SUB CODE: 17,14 SUBM DATE: 00/ ORIG REF: 001/ OTH REF: 000

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

GORSHKOV, V.A.; PODMOSHENSKIY, I.V.; POPOV, L.V.

Use of heavy elements in a powerful capillary light source.
Nauch.-tekh. fot. 9:167-170 '64.
(MIRA 18:11)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

ACC NR: AP7006920 SOURCE CODE: UR/0237/67/000/001/0022/0024

AUTHOR: Demidov, M. I.; Podmoshenskiy, I. V. (Candidate of sciences); Popov, L. V.; Ushakova, D. I.

ORG: none

TITLE: The EV-64 high-intensity light pulse source

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 1, 1967, 22-24

TOPIC TAGS: electric lamp, light source, pulse lamp, pulse light source, light pulse generator/EV64 pulse lamp, EV64 pulse generator

ABSTRACT:

The EV-64 high-intensity light pulse source, a new version of the EV-39, described earlier by Demidov and others (Optiko-mekhanicheskaya promyshlennost', no. 1, 1960), is presented. The EV-type light pulse sources are based on capillary discharge with the evaporation of walls. The EV-64 has a capillary 2 mm in diameter in a textolite plate 10 mm thick. The capillary is mounted in a discharge chamber 1000 m long and 508 mm high (see Fig. 1). The pulses from a discharge current of 9 to 10 kamp between graphite electrodes 14 mm in diameter, fed from a battery of capacitors at a rated

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ACC NR: AP7006920

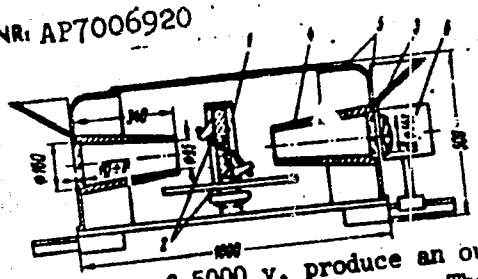

Fig. 1. Discharge chamber of the EV-64 light pulse generator:

1 - Plate with the capillary; 2 - electrodes; 3 - protective plates; 4 - damper; 5 - exhaust holes; 6 - lens.

voltage of 5000 v, produce an output of radiative power of 82 wt at a pulse duration of 1.4 msec. The power supply circuitry, which is composed of a system of LCR circuits and primer discharge gaps, is described in detail. The pulse shape is close to the π-form obtained by the superposition of LC and RC circuit currents. The pulse duration can be varied by positioning an auxiliary 12-mm discharge gap on two parallel copper bars. The pulse amplitude reproducibility was within about 1%; that of the spectral brightness at 0.9 of the maximum level was better than 3%. The reproducibility of the pulse duration was around 7%. It is noted that the 1.5-msec pulse duration is the limit under given conditions, due to the burnout of the diameter of the discharge capillary. Special methods for keeping the diameter of the discharge channel constant are considered necessary for an extension of the pulse duration. Orig. art. has: 3 figures. [FP]

SUB CODE: 20/ SUBM DATE: 23Feb66/ ORIG REF: 003/ ATD PRESS: 5117

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L 39622-66 EWT(l) IJP(c) WW/GG/GD-2

ACC NR: AP6002840 SOURCE CODE: UR/0237/60/000/001/0001/0005

AUTHOR: Ogurtsova, N. N.; Podmoshenskiy, I. V.; Demidov, M. I.

ORG: none

TITLE: Pulsed light source with radiation similar to that of a complete black body at a temperature of about 40000 K

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 1, 1960, 1-5

TOPIC TAGS: black body radiation, light pulse, light source, luminescence, optic brightness, discharge tube, absorption spectrum, continuous spectrum, gas discharge, light radiation, temperature

ABSTRACT: The unique properties of a high-intensity flash discharge with a limited diameter of the discharge channel were utilized in designing an EV-39 high-temperature light source calibrated by luminance. The test results show that 1) in the region of 1900-8000 Å the source emits a uniform continuous spectrum, 2) the central part of the discharge channel with a diameter of 1 mm has a constant luminance within an accuracy of ±2% and that the luminance decreases at the edge of the aperture, 3) the radiation source is square shaped and that the form and duration of the light source do not vary with the wavelength, 4) the brightness temperature of the source in the spectral region = 4000-6000 Å does not vary with the wavelength and amounts to 39000±10000 K, and 5) the spectral density measurements are within an accuracy of ±7%. The EV-39

Card 1/2

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L 39628-66

ACC NR: AP6002840

light source was designed by Ye. N. Isakov and V. M. Boreyko on the basis of an electrical circuit developed by the authors and described in the present article. These type of light flash sources are currently used in high-speed photography and gas pyrometry, as well as for obtaining plasma absorption spectra and studying gas dynamics. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 26Jul59/ ORIG REF: 002/ OTH REF: 001/

Card 2/2 MLP

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

L 15280-66 EWT(l)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JL/WW/GG

ACC NR: AT6001402 SOURCE CODE: UR/3180/64/009/000/0157/0170

48
46

AUTHOR: Gorshkov, V.A.; Podmoshenskiy, I.V.; Popov, L.V.

ORG: none

21,44,55

B+/

TITLE: The use of heavy elements in power capillary light source

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinematografii. Uspekhi nauchnoy fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed photography and cinematography), 167-170 and insert facing page 168

20,44,55

TOPIC TAGS: light source, capillary light source, electric discharge

ABSTRACT: For the generation of continuous spectra from capillary sources the source must have a large coefficient of continuous absorption. Large pressures are required within the capillary, i.e., low efflux velocity. This can be achieved by introducing into the capillary walls elements with atomic weights of the order of 100 — 200 which reduce the efflux velocity from 12 to 2 — 3 km/sec. The final capillary tube used for testing had the form shown in Fig. 1.

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L 15280-66
ACC NR: AT6001402

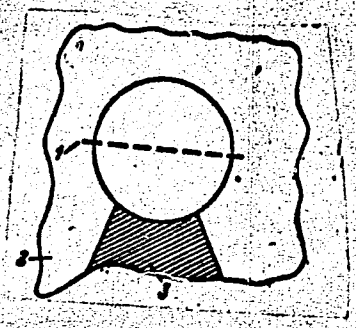

Fig. 1 Capillary for the determination of the relative emission capability of light and heavy atoms (end view). 1 - position of the spectroscope slit, 2 - textolite; 3 - KRS-5 monocrystal containing TlI and TlBr compounds.

An analysis of the experimental data shows that the use of heavy elements in strong capillary light sources does indeed increase the pressure within the capillary. The emissivity of heavy plasmas containing Cd, I, Tl, and Br atoms is 4 — 6 times larger than the emissivity of a plasma containing only H, C, and O. Heavy atoms allow, consequently, the use of short capillaries leading to light sources close to surface radiators. Orig. art. has: 2 formulas and 2 figures.

SUB CODE: 14, 20 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 001

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

BAYUNOV, V.I.; PODMOSHENSKIY, V.P.

High-voltage pulse generator using high-frequency magnetic materials for charge ignition. Zav.lab. 28 no.5:627-628 '62. (MIRA 15:6)

(Electric generators)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

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PODMOSKOVNOV, G.

Moving .ictures

New objectives. Kinomekhanik no. 3, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODMOSTKOV, A.

Is writing a Stakhanovite Dissertation on "Removal of Slag with Low Copper Content from Blast Furnaces"

Soviet Source: N: Komsom o'skaya Pravda, 10 January 51, Moskva
Abstracted in USAF, "Treasure Island", on file in Library of Congress, Air Information Division, Report No. 96130.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

DANILOVA, K.S.; NESHATAYEVA, Ye.V.; PETROVA, E.B.; PODMOSTKOVA, V.A.; YAKIMOV, P.A.

Use of cotton or sunflower seed cake extracts in the biosynthesis of penicillin and tetracyclines. Trudy Len.khim.-farm.inst. no.15:31-37 '62. (MIRA 15:11)

(PENICILLIN) (TETRACYCLINE)
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODMOSTKOVA, V.A.; PETROVA, E.B.; YAKIMOV, P.A.

Test of the strain Novyi gibrid on starch-lactose corn and cotton seed cake media. Trudy Len.khim.-farm.inst. no.15:39-43 '62.
(MIRA 15:11)

(PENICILLIUM)
(BACTERIOLOGY—CULTURES AND CULTURE MEDIA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

YAKIMOV, P.A.; PODMOSTKOVA, V.A.; PETROVA, E.B.

Effect of soy, boron and potato introduced into the composition of the fermentation media on the biosynthesis of penicillin. Trudy Len.khim.-farm.inst. no.15:63-68 '62. (MIRA 15:11)
(PENICILLIN)
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

YAKIMOV, P.A.; GORSHKOV, B.G.; LEBEDEV, N.A.; CHEKMEZOVA, O.V.; PETROVA, E.B.; PODMOSTKOVA, V.A.; VITUSHKINA, A.T.

Utilization of starch-potato media in the production of penicillin. Trudy Len.khim.-farm.inst. no.15:69-74 '62. (MIRA 15:11)

1. Kafedra tekhnologii antibiotikov (zav. - prof. P.A.Yakimov) Leningradskogo khimiko-farmatsevticheskogo instituta i Krasnoyarskiy zavod meditsinskikh preparatov (dir. - B.G.Gorshkov).
(PENICILLIN)
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

LARIONOVA, T.V.; PETROVA, E.B.; PODMOSTKOVA, V.A.; YAKIMOV, P.A.

Effect of molybdenum and boron in an enriched medium on the biosynthesis of streptomycin. Trudy Len.khim.-farm.inst. no.15:121-126 '62. (MIRA 15:11)

(STREPTOMYCIN)
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODMOSTKOVA, V.A.; PETROVA, E.B.

Determination of oxytetracycline in feeds. Trudy Len.khim.-farm. inst. no.[illegible]273-275 '62. (MIRA 15:11)
(OXYTETRACYCLINE) (FEEDS—ANALYSIS)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PETROVA, E.B.; PODMOSTKOVA, V.A.; YAKIMOV, P.A.

Study of the conditions for replacing carbohydrate media with starch and potatoes in penicillin production without lowering the antibiotic yield. Antibiotiki 6 no.6:492-496 Je '61. (MIRA 15:1)

1. Kafedra tekhnologii antibiotikov Leningradskogo khimiko-farmatsevticheskogo instituta.
(PENICILLIN)

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KOTELYANSKIY, E.O., kand. med. nauk.; POLNYSHAL'SKAYA, V.S.

A case of prolonged retention of a stone splinter in the anterior chamber of the eye. Oft. zhur. 13 no.6:359-360 '58. (MIRA 12:1)

1. Iz Uzhgorodskogo gosudarstvennogo universiteta.
(EYE--FOREIGN BODIES)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEBESOV, A.

Much is given, much is required. Scv. profsoiuzy 18 no.1:16-18 Ja '62. (MIRA 15:2)

1. Predsedatel' zavodskogo komiteta Syzranskogo kombaynovogo zavoda.
(Syzran--Agricultural machinery industry)
(Trade unions)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEBSEK, Janez, ing.

Judgment of the corrosion resisting quality of metals.
Elektr vest 28 no.3/5:82-88 '60.

1. Tovarna "Iskra", Kranj.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEBSEK, Janez, ing.

Judgment of corrosion-resisting quality of metals. Elektr vest 28 no.3/5:82-88 Mr-Ap '60. (EEAI 10:5)

1. Tovarna Iskra, Kranj.
(Corrosion and anticorrosives) (Metals)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

NOVIKOV, V.A., gornyy inzhener; PODNEBESOVA, L.N., gornyy inzhener.

Testing machines for short delay blasting. Gor.zhur. no.1:62-63 Ja '56. (MLRA 9:5)

(Blasting)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEK, Al'fred Ivanovich

PODNEK, Al'fred Ivanovich and K. PAVLOV. Kazakstan v sisteme narodnogo khoziaistva S.S.S.R. Alma-Ata, Izd. Gosplana Kazakskoi A.S.S.R., 1930. 56 p.
DLC: HC487.K3P6

SO: LC, Soviet Geography, Part II, 1951/Unclassified.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEK, Al'fred Ivanovich

PODNEK, Al'fred Ivanovich AND K. PAVLOV. Kazakstan v sisteme narodnogo khoziaistva SSSR. Alma-Ata, Izd. Gosplana Kazaksloi ASSR, 1930. 56 p. DLC: HC487.K3P6

SO: LC, Soviet Geography, Part I, 1951, Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEK, A. K.

PODNEK, A. K.: "Investigation of the effect of xanthogenate and of certain modifiers on the flotation of celenite, [illegible], and cerussite using the method of radioactive [illegible]" Min Culture USSR. Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst. Leningrad, 1956 (Dissertation For the Degree of Candidate in Technical Sciences)

So: Knizhnaya Letopis', No. 18, 1956

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEK, A.K., KHAYNMAN, V. Y., BOGDANOV, O. S., and YANIS, N. A.

"Investigation of the Action of Modifying Agents in Flotation," a paper presented at the International Mineral Dressing Congress, 18-21 Sep 57, Stockholm.

SO: C-3,800,349

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEK A. K.

SOV/137-58-10-20395

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 6 (USSR)

AUTHOR: Bogdanov, O. S., Podnek, A. K., Khaynman, V. Ya., Yanis, N. A.

TITLE: Studies by the Mekhanobr Institute in the Field of Flotation Theory (Raboty instituta Mekhanobr v oblasti teorii flotatsii)

PERIODICAL: Obogashcheniye rud, 1957, Nr 5, pp 25-28

ABSTRACT: A brief examination is made of the major studies conducted at the Mekhanobr Institute in the field of study of the physical and mechanical foundations of flotation and the reaction between flotation reagents and minerals.

M. M.

1. Ores--Flotation 2. Flotation--Theory 3. Reagents--Chemical reactions
4. Minerals--Chemical reactions

Card 1/1

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEK, A. K.

O.S. Bogdanov, A. K. Podnek and V. Ya. Khaynman (Mekhanobr)

"The kinetics of the action of flotation reagents"

report presented at the 4th Scientific and Technical Session of the Mekhanobr Inst, Leningrad, 15-18 July 1958

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

SOV/136-59-3-4/21

AUTHORS: Bogdanov, O.S., Professor, Podnek, A.K., Candidate of Technical Sciences and Khaynman, V.Ya., Engineer

TITLE: The Kinetics of the Absorption of Flotation Reagents by Minerals (Kinetika pogloshcheniya flotatsionnykh reagentov mineralami)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 3, pp 12 - 18 (USSR)

ABSTRACT: The authors note the scarcity until recently of research on the kinetics of flotation-reagent absorption. They refer to the work at Gintsvetmet, directed by S.I. Mitrofanov (Ref 1) in this field, which led to equations by which their own results could be represented. Figure 1 shows the linear isotherms of the logarithm of absorption against the logarithm of time for xanthate consumptions of 1 000 and 50 g/ton. The authors consider first the rate of exchange of ions of the same and of different valencies when the amount of sorption is negligible. The use of an adsorption column (Figure 2) enables reagent-absorption to be measured in 2-3 sec and greatly reduces the influence of ions displaced from the mineral surface on subsequent sorption. Integrating the rates of sorption deduced for infinitesimal layers the

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The Kinetics of the Absorption of Flotation Reagents by Minerals

authors obtain an expression for that in the whole column, showing that for equi-valent ion exchange the rate is proportional to the initial concentration of the solution, i.e. the proportion of the reagent absorbed in the mineral does not depend on the initial concentration. They go on to consider the exchange of ions of different valencies. Their experiments on the sorption of xanthate by galenite showed (Figures 3,4) contrary to their equation, that the relation between sorption and initial concentration is almost linear. This could be due to only one ion of xanthate being linked with one lead ion in the galenite crystal lattice, a type of sorption which has been shown (Ref 2) to be possible. They conclude that possibly experimental data on the absorption kinetics do not always reflect the mechanism of sorption (when the controlling factor is the diffusion of the reagent through the water envelope to the mineral surface). The other broad case considered is when the action of the reagent produces a multiple layer on the mineral surface. Here, the rate-controlling process is the diffusion of the reactants

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

The Kinetics of the Absorption of Flotation Reagents by Minerals

through the layer of reaction products and the authors deduce equations which represent their experimental results (Figure 5). In these experiments a weighed portion of galenite was stirred with xanthate solution at a solid:liquid ratio of 1:4.
There are 5 figures and 3 references, 2 of which are Soviet and 1 English.

Card 3/3

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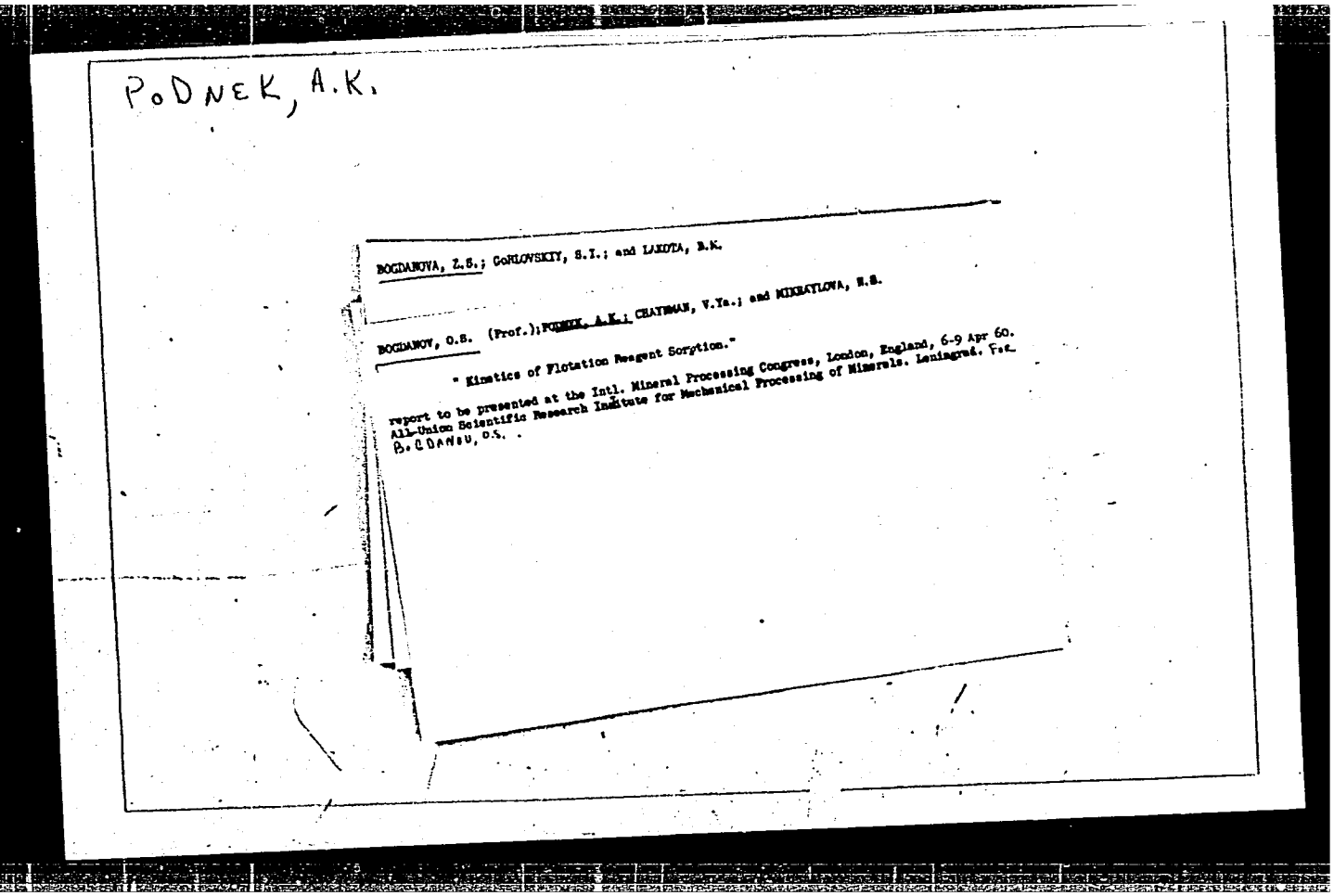

PODNEK, A.K.

BOGDANOVA, Z.S.; GORLOVSKIY, S.I.; and LAKOTA, B.K.

BOGDANOV, O.S. (Prof.); PODNEK, A.K.; CHAYKAN, V.Ya.; and NIKHATLOVA, N.S.

"Kinetics of Flotation Reagent Sorption."

report to be presented at the Intl. Mineral Processing Congress, London, England, 6-9 Apr 60.
All-Union Scientific Research Institute for Mechanical Processing of Minerals. Leningrad. Fac.
B.C DANOV, D.S.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

BOGDANOV, O.S., doktor tekhn. nauk, prof., otv. red.; BRAND, V.Yu., kand. tekhn. nauk, red.; DERKACH, V.G., doktor tekhn. nauk, red.; ZAKHVATKIN, V.K., red.; OLEVSKIY, V.A., kand. tekhn. nauk, red.; LOKONOV, M.F., kand. tekhn. nauk, red.; PODNEK, A.K., kand. tekhn. nauk, red.; TUSEYEV, A.A., red.; FINKEL'SHTEYN, G.A., kand. tekhn. nauk, red.; FOMIN, Ya.I., kand. tekhn. nauk, red.; CHERNOBROV, S.M., kand. tekhn. nauk, red.; KUTUZOVA, L.M., red.

[Transactions of the Fourth Scientific Technological Session of the Scientific Research Institute for Mechanical Concentration of Minerals] Trudy IV nauchno-tekhnicheskoi sessii instituta MEKHANOBR. Leningrad, 1961. 665 p. (MIRA 17:5)

1. Leningrad. Nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

BOGDANOV, O.S.; MIKHAYLOVA, N.S.; PODNEK, A.K.

Interaction of martite and quartz with sodium oleate in the presence of calcium ions. Trudy Mekhanobr no.128:17-25 '61. (MIRA 15:1)
(Flotation--Equipment and supplies) (Martite)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

BOGDANOV, O.S.; MIKHAYLOVA, N.S.; PODNEK, A.K.; KHAYNMAN, V.Ya.

Methods of investigating the sorption of flotation reagents by mineral mixtures. Obog. rud 4 no.5:3-5 '59. (MIRA 14:8)
(Flotation--Equipment and supplies)
(Sorption)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

BOGDANOV, O. S., KHAYNMAN, B. Y., YANIS, N. A. and PODNEK, A. K. (Moscow)

PODNEK, A.K.

"Study of the Flotation Process with Radioisotope Tracer Techniques."

paper presented at the Intl. Conference on Radioisotopes in Scientific Research in Paris, 19-20 Sept 1957.

Angewandte Chemie, No. 3, 1958.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEVICH, I.R.

Comparative evalutaion of peroral cholecystography and intravenous cholangiocholecystography in the examination of bile ducts. Zdrav. Bel. 9 no.1:34-36 J'63. (MIRA 16:8)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. -prof. P.N.Maslov) Minskogo meditsinskogo instituta.
(BILE DUCTS--RADIOGRAPHY) (GALLBLADDER--RADIOGRAPHY)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

POZNEVICH, I.R.

Intravenous cholangiocholecystography and duodenal probing in the diagnosis of cholecystitis. Zdrav.Bel. 8 no.11:24-26 N '62. (MIRA 16:5)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. P.N. Maslov) Minskogo meditsinskogo instituta.
(GALL BLADDER—RADIOGRAPHY) (BILE DUCTS—RADIOGRAPHY)
(DUODENUM—INTUBATION)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

MASLOV, P.N., prof.; PODNEVICH, I.R., kand. med. nauk

Diagnosis of calculous cholecystitis. Sov. med. 28 no.6:26-30 Je '65. (MIRA 18:8)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. P.N. Maslov) Minskogo meditsinskogo instituta.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNEVICH, I.R. (Minsk)

Intravenous cholegraphy in the diagnosis of cholecystitis. (MIRA 17:3)
Klin. med. 41 no.2:60-65 F'63

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. P.N. Maslov) Minskogo meditsinskogo instituta.

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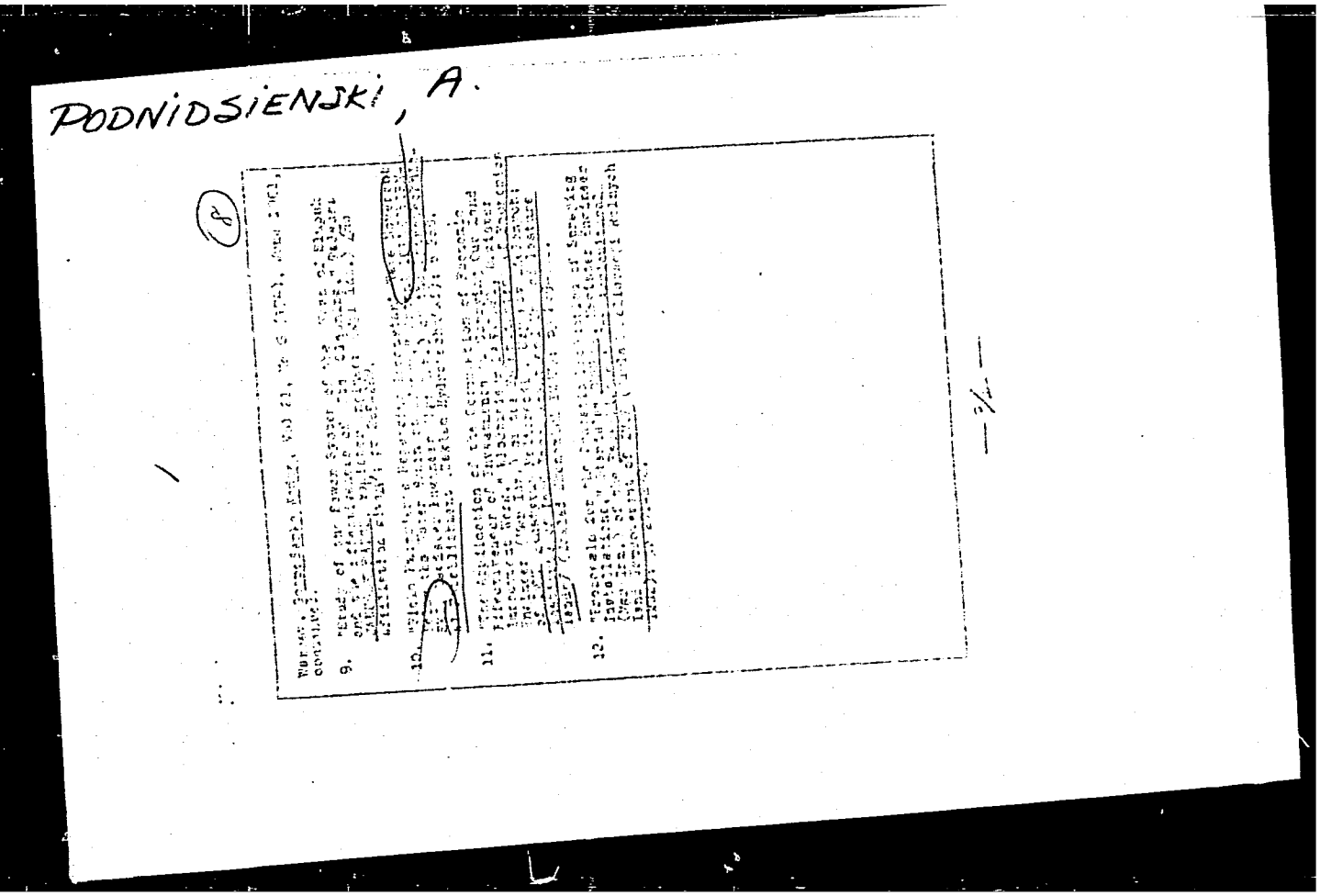
PODNIDSIENSKI, A.



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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNIESINSKI, Antoni, mgr., inz.

Analysis of hydromechanical methods for determining border parameters of movement applied to complete wells and earth dams. Gosp wodna 22 no.2:83-84 F '62.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

PODNIESINSKI, Antoni, mgr., inz.

Anticipating negative influence of water reservoirs on adjacent territories and the necessity of their concentration. Gosp wodna 22 no.1:41-42 '62.

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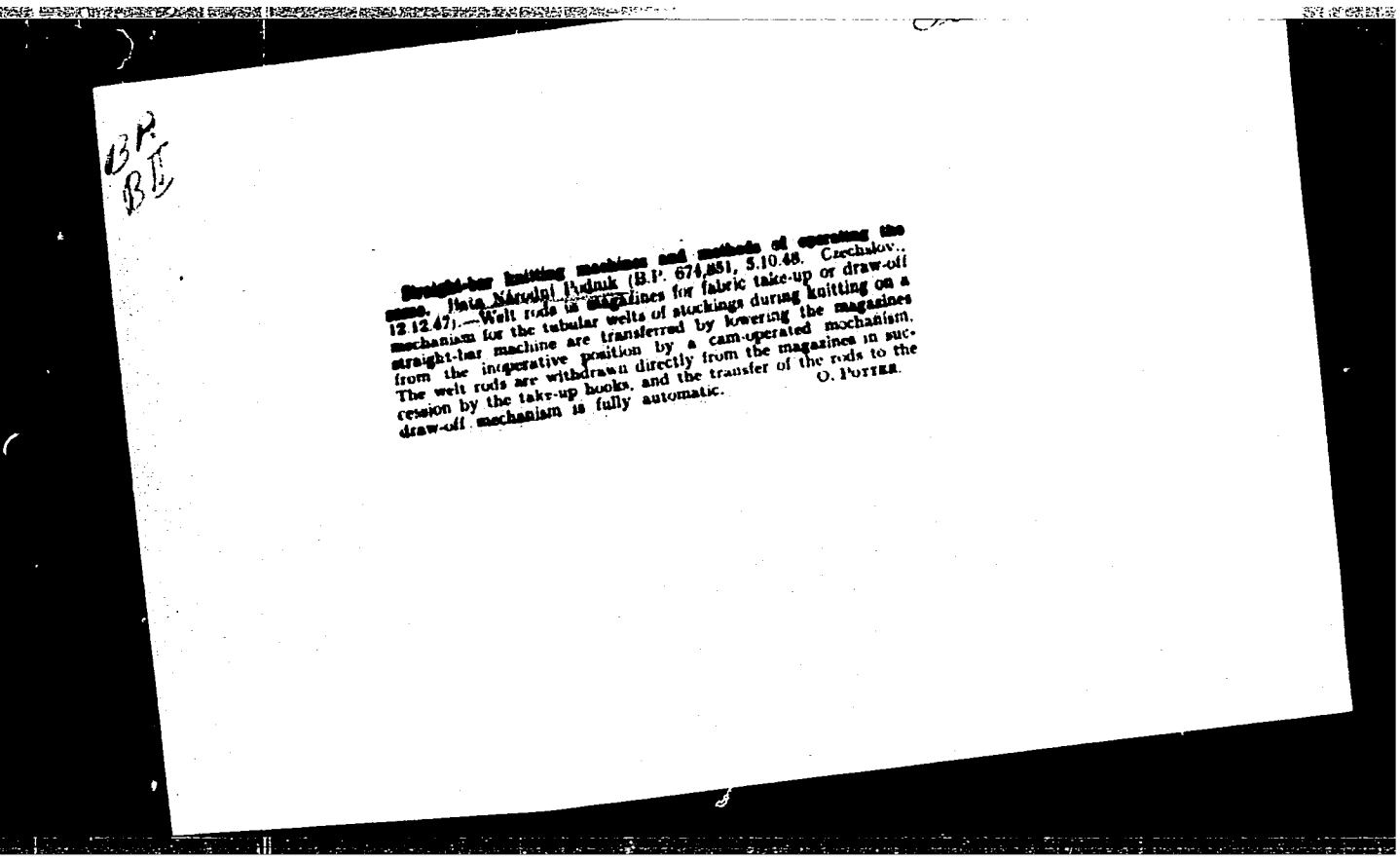

BP
BE

Straight-bar knitting machines and methods of operating the same. Ilnia Národní Podnik (B.P. 674,851, 5.10.48. Czechslov., 12.12.47).—Welt rods in magazines for fabric take-up or draw-off mechanism for the tubular welts of stockings during knitting on a straight-bar machine are transferred by lowering the magazines from the inoperative position by a cam-operated mechanism. The welt rods are withdrawn directly from the magazines in succession by the take-up hooks, and the transfer of the rods to the draw-off mechanism is fully automatic. O. POTTER.

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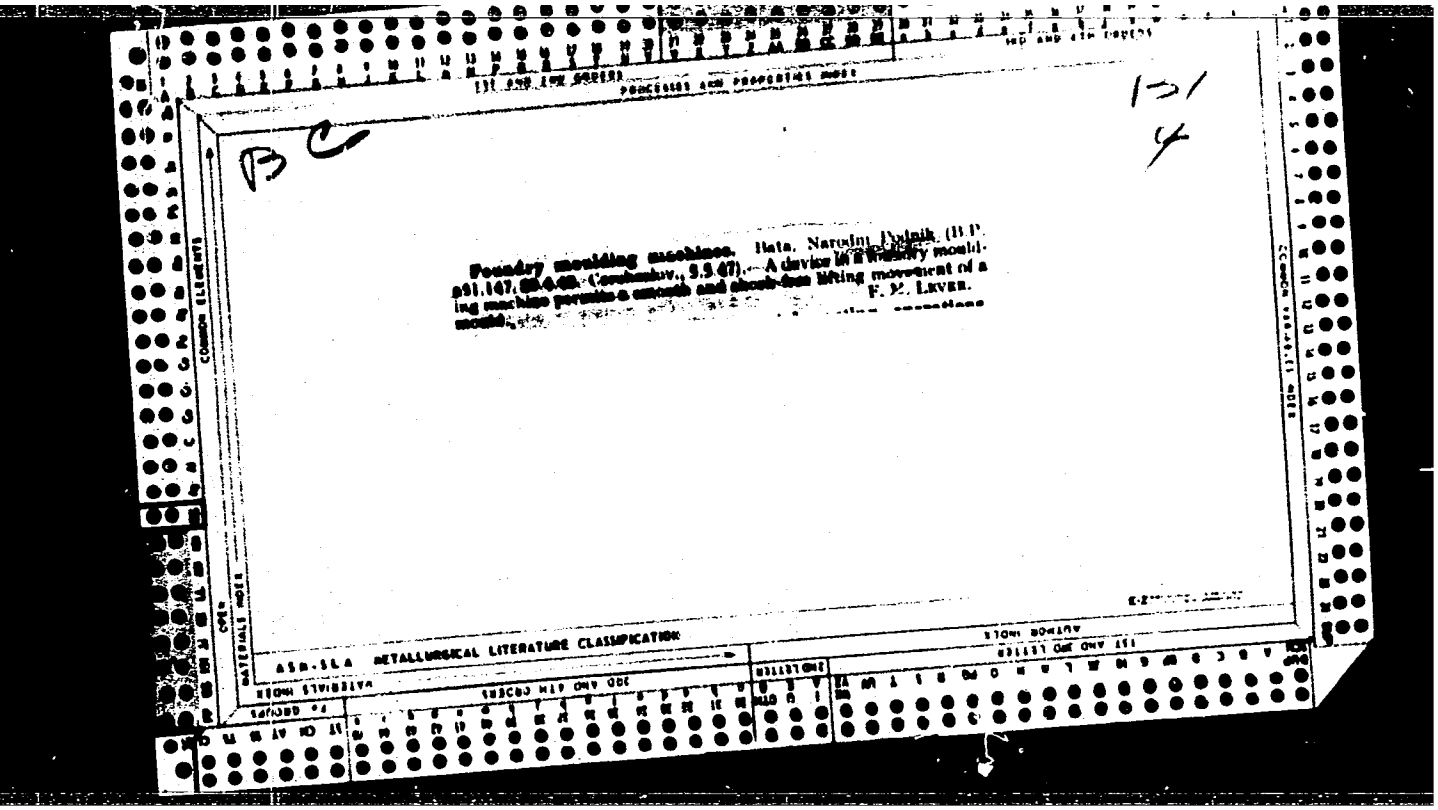
"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5



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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

64

61
10

Radiators for heating buildings. Bata, Narodni Podnik (B.P. 656,811, 19.10.48. Czechoslov., 27.10.47 and 15.4.48.)—Pipes through which the heating medium flows are embedded in a concrete body having metal particles incorporated therein to improve the thermal conductivity. The concrete body is partly surrounded by a metal sheath provided with corrugations through which air currents rise. One side is not covered by the sheath but has reinforcing wire netting embedded in the concrete. R. J. Cox.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341510001-5

N. PODNIK

Method of manufacturing 3-picoline. U. Závody N. Podnik, a Czech Nat. Corp., of Ostrava, Czechoslovakia, and L. Rusek (B.P. 701,179, 4.9.51. Czechosl., 30.9.50).—In a method claimed for manufacturing 3-picoline [-methylpyridine], a mixture of the pyridine bases contained in tar base fractions b.p. 140—145° is treated with $CuCl$, $CuCl_2$, or $CuCl_2$ in the presence of reducing substances, *e.g.*, SO_2 or acid sulphites of alkali metals. The crystalline precipitate produced is decomposed by distillation with steam in the presence of a base (NaOH). Thus to 200 g. of pyridine bases containing 3- (30%), 4- (35%), and 2 : 6-di-methylpyridine (35%) is added at the b.p. over 45 min. a solution of 60 g. of $CuCl_2$ in 60 c.c. of water. After boiling for 2 hr. the mixture is cooled, and the precipitate distilled with steam in the presence of alkali metal hydroxide. 45·7 g. of 3-methylpyridine >99% pure being obtained.

O. M. WHITTON.

10-13-54 MEP

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PODNIK-N.

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Method of manufacturing 3-picoline. U. Závody, N. Podnik, a Czech Nat. Corp., of Ostrava, Czechoslovakia, and L. Hirsch. (B.P. 701,179, 4.9.51. Czecheal., 30.9.50).—In a method claimed for manufacturing 3-picoline [-methylpyridine], a mixture of the pyridine bases contained in tar-base fractions b.p. 140—145° is treated with CuCl, $CuCl_2$, or $CuCl_2$ in the presence of reducing substances, *e.g.*, SO_2 or acid sulphites of alkali metals. The crystalline precipitate produced is decomposed by distillation with steam in the presence of a base (NaOH). Thus to 200 g. of pyridine bases containing 3- (30%), 4- (35%), and 2 : 6-di-methylpyridine (35%) is added at the b.p. over 45 min. a solution of 60 g. of $CuCl_2$ in 60 c.c. of water. After boiling for 2 hr. the mixture is cooled, and the precipitate distilled with steam in the presence of alkali metal hydroxide, 45·7 g. of 3-methylpyridine >99% pure being obtained.

O. M. Whitton

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B-II

6

Method of treating artificial fibres. Zavody pro Chemicku Vyrobu Narodni Podnik and Elite Sdruzene Tovarny Puncoch Narodni Podnik (B.P. 670,984, 24.6.49. Czechoslov., 25.6.48).— High-twist yarns (>900 twist turns per m.) of synthetic linear polymers and polycondensates, *e.g.*, polyamides and polyurethanes, are completely processed on perforated sheet-metal twisting cops without removing or rewinding. The processing may include twisting, impregnation with resins, *e.g.*, hydantoin–CH_2O resins, steaming, dyeing, delustring, stiffening, and softening.

D. H. Coffey.

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B-II

Method of treating artificial fibres. Zavody pro Chemickou Vyrobu Narodni Podnik and Elite Sdruzene Tovarny Puncoch Narodni Podnik (B.P. 670,994, 24.6.49. Czechoslov., 25.6.48).—High-twist yarns (>900 twist turns per m.) of synthetic linear polymers and polycondensates, *e.g.*, polyamides and polyurethanes, are completely processed on perforated sheet-metal twisting cops without removing or rewinding. The processing may include twisting, impregnation with resins, *e.g.*, hydantoin-CH_2O resins, steaming, dyeing, delustring, stiffening, and softening.

D. H. COFFEY.

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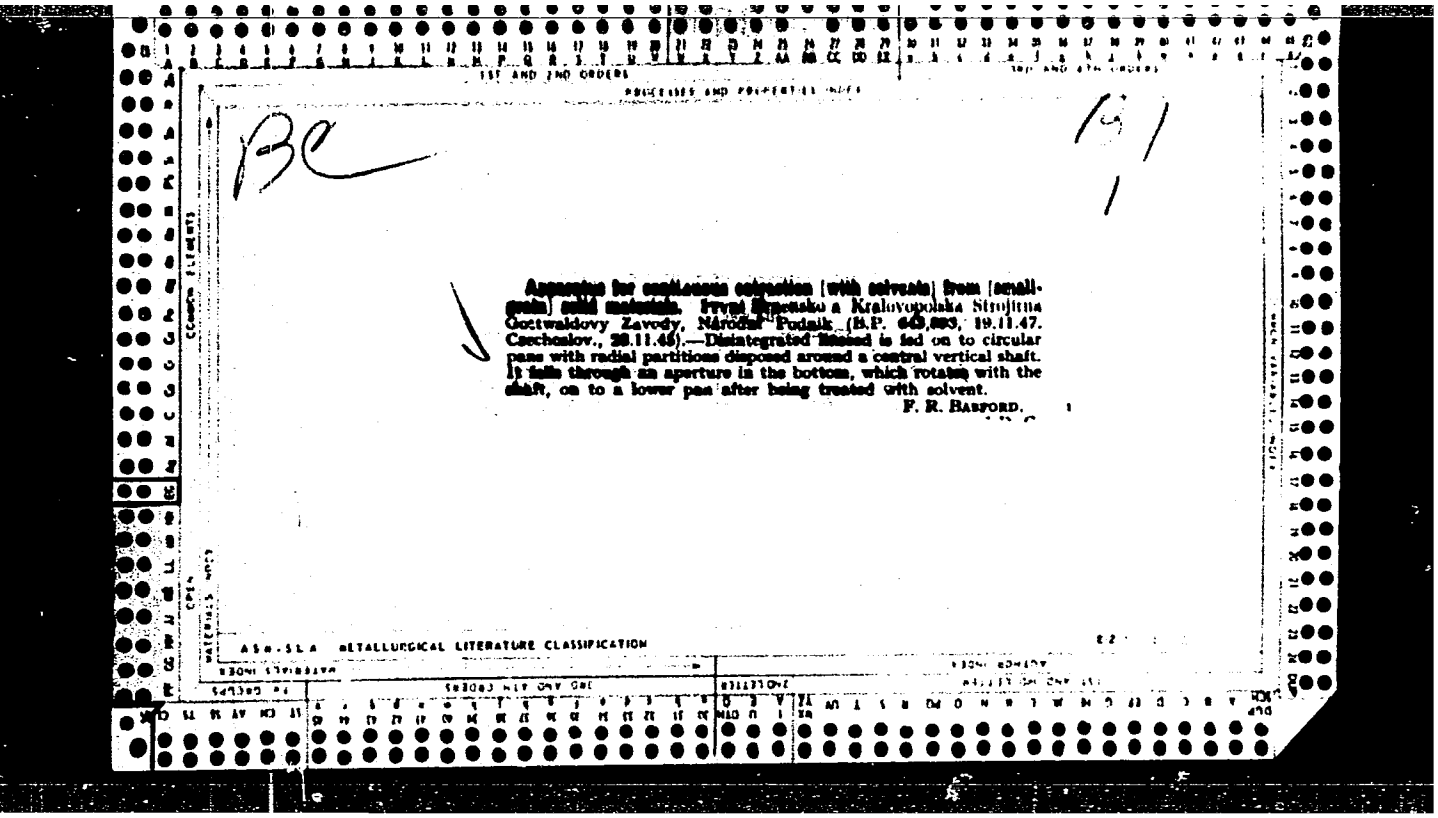

BC

Apparatus for continuous extraction [with solvents] from [small-grain] solid materials. Fryml Spotrebni a Kralovopolska Strojirna Gottwaldovy Zavody, Narodni Podnik. (B.P. 625,893, 19.11.47. Czechoslov., 28.11.46).—Disintegrated material is fed on to circular pans with radial partitions disposed around a central vertical shaft. It falls through an aperture in the bottom, which rotates with the shaft, on to a lower pan after being treated with solvent.

F. R. BRADFORD.

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

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889. Arrangement for obtaining derivative polarographic curves. Zbrojovka Brno, Narodni Podnik (B.P. 662,457, 29.12.49. Czech., 14.1.49).—A resistance is inserted into the electrolytic circuit containing a polarisable electrode. A condenser and a galvanometer are connected in series to the terminals of the resistance, thus forming a resistance-condenser circuit, the current of which is ∝ the differential quotient of the electrolytic current by the polarising voltage.

J. M. JACOBS.

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B1-4 General Metallurgy

Methods of making moulding shapes from sand and other powdered granular, pasty, or fluid materials. Vithovicke Zelezarny Narodni Podnik, and L. Petrzela (B.P. 654,817, 10.12.48. Czechoslov., 12.12.47 and 1.3.48).—Sand casting moulds and cores, foundry casting patterns, etc., are prepared by mixing sand or other basic material with a binder, e.g., Na silicate, ethyl silicate, etc., and after shaping, the mould is treated with a precipitant (CO_2, NH_3, HCl, methanol, ethanol, acetone) to form SiO_2 gel and harden the mould. J. M. Jacobs.

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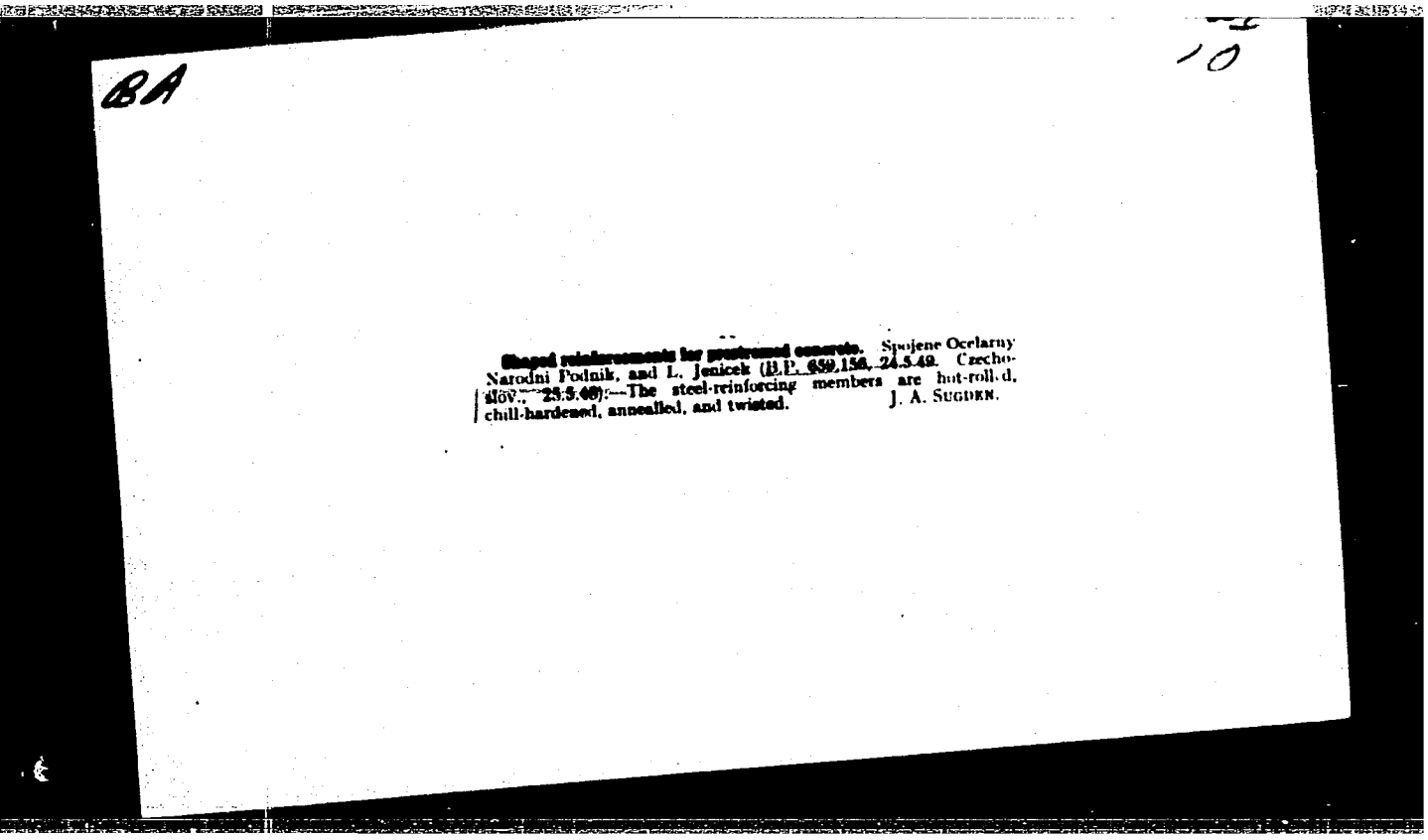

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Shaped reinforcements for prestressed concrete. Spojene Ocelarny Narodni Podnik, and L. Jenicek (B.P. 659,156, 24.5.49. Czecho-slov., 25.5.48).—The steel-reinforcing members are hot-roll.d, chill-hardened, annealed, and twisted. J. A. SUGDEN.

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